CEMC Monitoring Effectiveness Roundtable
April 7, 2000
Meeting Summary

The NOS Coastal Environmental Monitoring Committee (CEMC) held a roundtable discussion on Friday, April 7 to explore opportunities for improved integration/coordination of existing NOS monitoring programs. Having completed an inventory of existing monitoring activities, the roundtable represents the next step – examining how NOS can further improve the effectiveness and efficiency of existing monitoring programs. The meeting resulted in a number of ideas being put forward. Some of the "best" ideas were:

- Improve coordinated planning within NOS to capitalize on opportunities
- Focus NOS monitoring efforts on marine protected areas and trust responsibilities
- Identify and further develop national "reference sites" for NOS monitoring activities
- Improve assessments and data synthesis products
- Create an Internet-based portal site to access all of NOS' monitoring efforts and data

The following is an abbreviated summary of the meeting.

Setting the Context

The meeting started with a presentation of background materials to prepare roundtable participants (see Attachment 1 for list of participants). A series of maps were used to describe the approximately 23 NOS monitoring programs currently in place. The maps included information on the geographic distribution of monitoring locations, the focus of the monitoring effort, and a range of expenditures for the program.

Attention then shifted to a list of "Example Actions to Improve NOS Monitoring Effectiveness" which served as a starting point for discussions. Participants were asked to add to or modify the list and then voted for their top three possible actions (see Attachment 2 for the list of example actions, with votes recorded). Those actions with the highest number of votes were used as the basis for discussions of opportunities to improve the effectiveness of existing NOS monitoring activities. Each topic and discussion is summarized below, including a narrative that characterizes and provides flavor of the dialogue, a set of opportunities for further exploration, and a set of follow-up actions to gain additional information.

Clarifying Purpose

Discussion:

It is important to clarify the purpose of and understand the physical, ecological and economic reasons for NOS monitoring programs. NOS and NOAA have a high number of placed-based responsibilities (including trust responsibilities for the National Estuarine Research Reserve System (NERRS) and National Marine Sanctuaries (NMS), and safe navigation for port facilities). There are relationships between some of NOS' monitoring programs, though their purposes may be quite different. One participant outlined the possible example whereby NS&T identifies a toxicity problem in bottom sediments. If, based on this toxicity data, EPA and State authorities preclude dredging projects, it could lead to impacts on shipping and safe navigation and, potentially, increasing risk for other problems, such as oil spills, etc. (from inadequate

control depths or other hazards). Participants agreed on the need to respond to Dr. Foster's charge: Is each program operating at highest effectiveness? Are there opportunities to improve?

Opportunities:

- Identifying NOS place-based responsibilities (e.g., trust responsibility, safe navigation)
- Identifying connections between and among NOS monitoring programs
- Examining "layers" of purpose for NOS monitoring programs (e.g., adding a layer of purpose for NS&T to include monitoring needs for NERRS and NMS).

Follow-up Actions[1]:

- Look at the overlap between the Environmental Sensitivity Index (ESI) maps and beach change analysis.
- Focus and define clearly the purpose of monitoring for NERRS and NMS.
- *Develop groupings of monitoring programs, based on purpose and focus, for identification for potential synergies and collaboration.*

Relocation of Monitoring Stations

Discussion:

There are potential synergies between some programs such as NS&T and NERRS – the question is, how do you integrate them without any new resources? For example, are there opportunities to move existing NS&T stations to locations within NERRS and NMS? With some rethinking, it may still be possible to describe the "national picture" for NS&T while also supporting site-specific monitoring needs for NERRS and NMS. There is an existing policy that attempts to ensure that NS&T sites are located in these sites, however, there may be a need for improving communication between the programs. Gunnar Lauenstein's rotational assignment from NS&T to the NERRS program provides a potential model. In looking at the option of moving NS&T sites to locations within NERRS and NMS, we need to be aware of the potential for loss of established baseline data. Also, it appears that NS&T program funding is going to decrease, which may further limit opportunities to relocate monitoring. Though this roundtable is focused on existing programs, we may want to consider giving NERRS and NMS sites first consideration for new monitoring programs (use as a screening criteria). There's another advantage to locating monitoring sites within a NERR or NMS – the constituents for those sites become constituents for the NOS monitoring programs as a whole and could help garnering support for additional NOS monitoring resources.

Opportunities:

- Data collection for NS&T and NERRS
- Look at other programs (CISNet, Beach Mapping, etc.) for possible connections
- Investigate opportunities for moving additional Musselwatch stations

[1] The Special Projects Office added items in italics subsequent to the meeting.

· PORTS – opportunities for planning location of stations/partnerships [based on NEW resources – may be expanding PORTS from 4-30 new locations]

Follow-up:

· Look at other crossovers/linkages – NCCOS and NMS
· Conduct a GIS analysis of WHERE opportunities are the greatest – overlay existing NOS monitoring activities and "drill down" to see where the most overlaps occur

Collaboration

Discussion:

There are a number of opportunities for further collaboration within NOS and with external partners to improve monitoring, particularly with respect to how we communicate. While potential expansion of PORTS affords opportunities to add additional probes to those stations (e.g., dissolved oxygen sensors), there are not enough existing resources to make this happen. An example was highlighted whereby the Office of the Coast Survey is collaborating with the Coastal Services Center to add additional data and enhance hydrographic surveys in Florida. OR& R and NMS/NERRS have high potential for linkages especially relating to restoration (though not necessarily monitoring). There are also links between ESI/NMS and coral mapping. Finally, there may be additional opportunities for collaboration as new resources become available in the FY01 and future year budgets.

Opportunities:

· Further look at opportunities in NERRS and NMS for modifications to existing NOS programs.
· Bioeffects and PORTS [with NEW money]
· External partners – OCS coordination with Army Corps of Engineers and U.S. Geological Survey
· USGS mapping of NMS (West Coast)
· Hydro Survey and CSC
· OR&R and restoration at NMS and NERRS [NEW money?]
· OR&R analysis of dispersants – connection with bathymetry and possibilities for NMS
· NCCOS coral reef work – opportunities for collaboration with NMS
· COOPS – water level stations – opportunities for coordination with NERRS and NMS – interest by Reserves in water level information [NEW money?]
· NOS could take the lead in development of reference sites with intensive/comprehensive information on all parameters for a given location – perhaps including relocation of existing stations. [some NEW money required for this?]

Follow-up:

· Need to ensure that existing collaboration efforts are working smoothly – there appears to be an issue with other parts of NOS/NOAA getting timely data/information from NGS.

- Coast Survey – surveys are only done every 20 years and focus is on critical areas (critical for navigation) – how can we identify opportunities to match OCS activities with other NOS programs?

Data Dissemination

Discussion:

Participants discussed several ways to improve the dissemination of data and information collected from NOS monitoring activities. For example, the Internet provides a means to collect and put in one place all relevant information on NOS monitoring, including links to data sets and other agencies. As many program offices (NERRS, CO-OPS, and NCCOS) have data management staff, there is a need to get these staff together and identify how we might further develop data dissemination commonality. The Spatial Data Synergy group was mentioned as a place to start. All participants agreed NOS needs to work on improving data delivery – mostly as it relates to data interpretation and assessment. There is also a need to ensure consistent metadata, develop consistent monitoring protocols, and examine the potential for integration of data sets. Each of the program offices were asked, on a scale of one to ten, how they would rate their current data dissemination activities:

PORTS – (8) on overall effectiveness, (5) in communicating with Congress
CSC – (7-8) on delivery and assessment
NMS – (2?) don't have data at the majority of NMS sites. Good at sites that do have data (e.g., FKNMS), but little current capacity to provide "national picture."
OCS – all data goes through National Geographic Data Center to conform to their standards. There are opportunities for coordinating and integrating with other sources.
NCCOS – Musselwatch (9) for raw data – problem is a communication issue – what do the numbers mean? (6-7) on communication to external audiences.
NERRS – (6-7) on raw data collection, (2-3) on products developed from data – have not done as good a job on assessment products – what does the information tell you?

Opportunities:

- PORTS currently provides multiple avenues for data dissemination – including real-time for local use and Internet for other users. May provide a model for NOS integration.
- GIS could be used to make improvements, particularly HOW information is presented and integrated with other data sets.
- Get data managers together to further coordinate activities [look to see what's already happening on this with Spatial Data synergy effort]
- NERRS – developing a system-wide effort for data dissemination

Follow-up:

- Develop consistent metadata and monitoring protocols
- Look at how we collect oxygen measurements – what is the comparability between NS&T, NERRS and Hypoxia surveys?

- Data integration (e.g., water level and D.O.)
- Look at what regional and state authorities are doing in sampling for sediment toxicity and fish – look for ways to make connections/establish reference for those activities.

Conclusion

The CEMC will now take a closer look at the ideas that were developed to determine how they might be implemented (specific activities that can be undertaken). A follow-up to the *Improving Effectiveness of NOS Monitoring* roundtable will be held on Friday, April 28 to further examine the opportunities identified above and determine more detailed actions necessary to accomplish them. The CEMC will also hold subsequent roundtable discussions to further examine and develop a vision for the appropriate role for NOS in coastal environmental monitoring. The next roundtable will focus on NOS' role in assessing the environmental condition of the coast on a national and regional scale.

ATTACHMENT 1

CEMC Monitoring Effectiveness Rountable
April 7, 2000

Attendee's Name and Office

Dan Farrow, SPO
Peyton Robertson, SPO
Alison Hammer, SPO
Laurie McGilvray, OCRM/ERD
Becky Smyth, MB/PAC
Dwight Trueblood, OCRM/ERD/CICEET
Gunnar Lauenstein, NCCOS/OCRM
Tom O'Connor NCCOS/CCMA
Stephen Gill, CO-OPS
Marty Welch, CO-OPS
Steve Gittings, MSD
Paula Souik, MSD
Geno Olmi, CSC
Amy Merten, OR&R/HQ
Alan Mearns (phone), ORR/Hazmat (Seattle)
Betty Wenner (video), SC DNR working with OCRM/ERD
Jack Wallace, OCS Staff
Andy Robertson, NCCOS/CCMA
Nancy Ragland, NCCOS/HQ, NOS Sr. Scientist Office
Jerry Mills, OCS/HSD
Curt Mason, NOS Sr. Scientist Office
Nathalie Valette-Silver, NCCOS

ATTACHMENT 2

EXAMPLE ACTIONS TO IMPROVE NOS MONITORING EFFECTIVENESS

Votes recorded at CEMC Roundtable on 4/7/00

ACTION TO IMPROVE NOS MONITORING EFFECTIVENESS	VOTE
1. Relocate/Co-locate existing monitoring stations	8
2. Add probes to existing stations (multi-sensor platforms)	3
3. Pool monitoring dollars for more efficient use	0
4. Share monitoring equipment	0
5. Perform joint maintenance/combine maintenance contracts	0
6. Develop consistent metadata/monitoring protocols	12
7. Develop more efficient/effective monitoring technologies	3
8. Improve data dissemination (e.g.,. expand networks, improve efficiency of data delivery, "one-stop shopping" protocols, packaging, etc.)	10
9. Integrate data sets [combined with #6 above]	
10. Expand external partnerships (e.g., EPA, USGS, DOI, states, academia)	6
11. Tighten connection between research, monitoring, and management decision making	8
12. Clarify purpose of monitoring programs, identify key user groups, and build stronger constituencies (better link data to users and user needs) *Added at meeting (12A): Better Communicate existing monitoring to Congress and to users. Have we done any good?*	6